UBERICK

Blood, sweat, tears...anything to ensure your comfort in transit!

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Critical Making Provocation 2: Design Document

Project Description

Uberick is a critical design piece re-imagining Uber-esque ride sharing services as the primary mode of transportation in the 1920s. The Uber model and app is applied to the traditional rickshaw and the personalization aspects are taken to an extreme by allowing riders to choose their car brand, a theme song, their driver's attire, and the manner in which the driver greets them. Rickshaws, a visually salient representation of class differences between the puller and rider and of the service industry more generally, are juxtaposed against the sleek Uber app and business model that is focused on automation, efficiency, and personalization. The goal of this juxtaposition is to call into question concerns of de-humanization of human service labor as a direct result of hiding workers behind machines and interfaces to cater to the comfort and convenience of consumers.

Project video: https://www.youtube.com/watch?v=5YP25NtEf6g

Project assets & connectivity demo: https://github.com/mimilei/uberick

Ideation

Initial Brainstorming

We started brainstorming human transportation devices and were immediately drawn to transportations that divide people into distinct social hierarchies. Rickshaws and palanquins intrigued us the most where they both indicate drastic social status between the people riding and moving the vehicle. We also found interesting that these two types of transportations were polar opposite of each other. In the context of rickshaws, amongst a group of people, one person is demoted in status to pull the rest around like an animal. Whereas for palanquins, one person amongst the group is promoted in status to be carried around by the rest of the people.

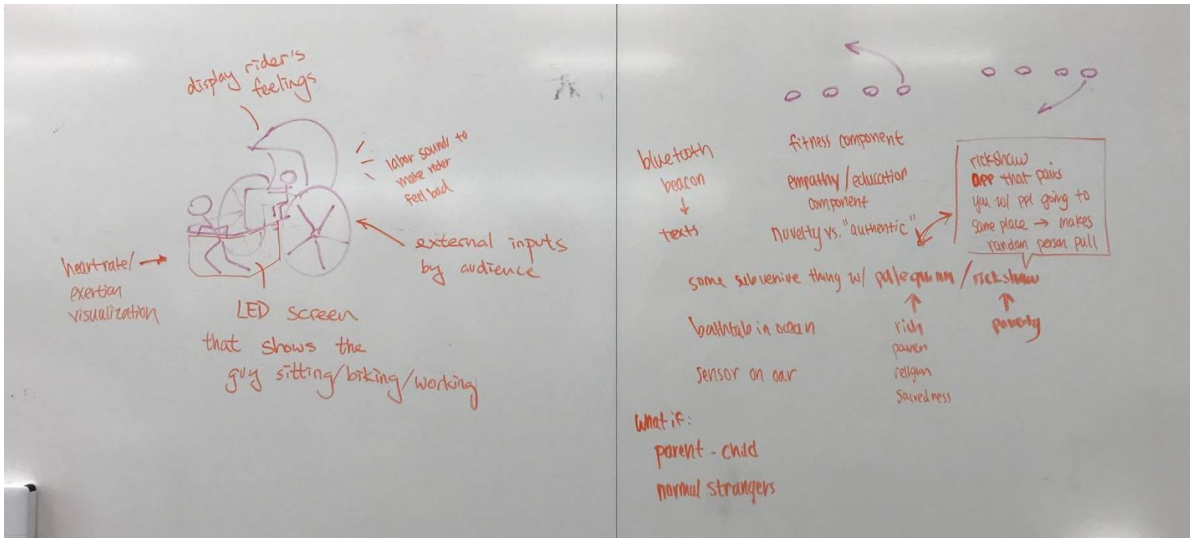

Figure 1: Initial brainstorming sketches of people pulling a rickshaw

Another form of transportation that appealed to us were stilts, similarly because of its dramatic visuals. We brainstormed ideas utilizing the height difference to indicate the different levels of social status. Intuitively, we saw height as a signal of power, so we thought maybe the height of the stilts can be directly proportional to one's social status. This would literally create two distinct levels where the powerful people are both physically and socially higher and the lesser status people would be out of sight on the lower level. However, the higher one gets the more vulnerable one becomes. With this duality, stilts became very interesting. Could stilts somehow equalize people in a certain way, or provocatively exacerbate interactions between people at different 'levels', literally.

In order to start a worthwhile conversation about the divide in social class, we believed our project needed to be visually salient to evoke powerful emotions from the audience. We

believed that by having someone sweating and working hard to move another human being can adequately do so.

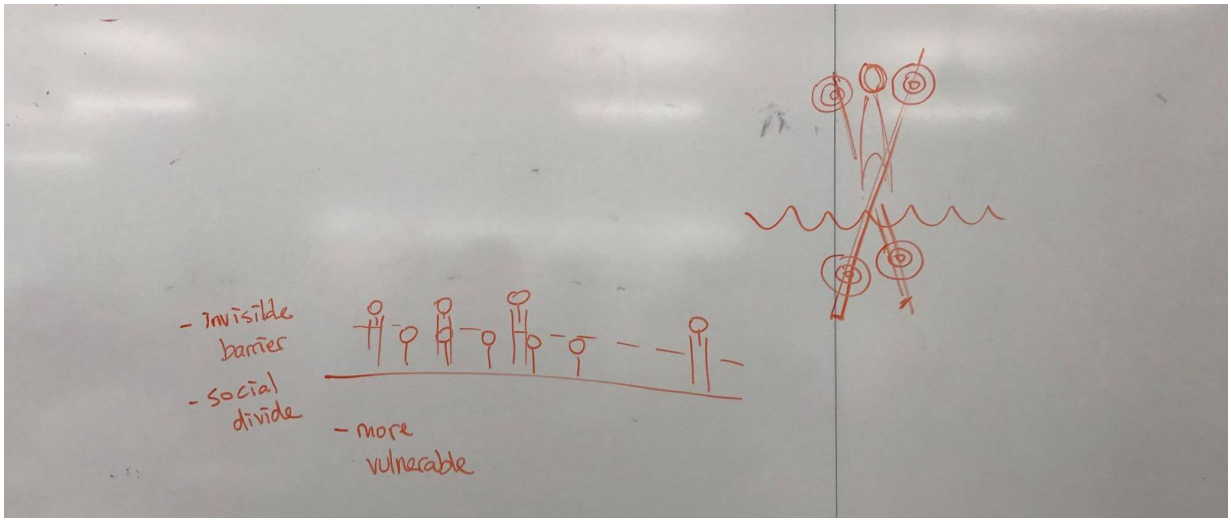

Figure 2: Initial brainstorming sketches of people on stilts

Converging on Uberick

We were most intrigued by the rickshaw form of travel because of its still-applicable nature (we learned, from research into the history of the vehicle, that it is primarily still used in Singapore and India for non-novelty purposes) and of the potential it had for social commentary. But, we needed some way to provoke that commentary. We considered going with an animal theme where the puller of the rickshaw would be equated to an animal. We considered having animal sounds on the rickshaw that would sound when the rickshaw was being pulled. We considered animal feeders on the rickshaw to ‘tip’ the puller.

We were also drawing the comparison of rickshaws to car ride services such as Uber and Lyft. Uber in particular being in the press with concerns of drivers being abused with long hours, low pay, and verbally abusive riders expecting drivers to figure out how to get around traffic. Riders of Uber use an app to interface with the driver about pick up location, drop off, payment, and even personalization such as music. Some elements of the human-to-human relationship are removed from the experience because of the app. While this creates efficiencies for both drivers and riders, it can also set an unreasonable expectation that the rider expects machine quality perfection in the end to end service, without much notice of what drivers have to go through to cater to their requests.

The human-to-human service industry is not only changing in transportation, but in food too. For example, Eatsa has introduced a human-to-machine-to-human interaction where the human

servicing the food is completely invisible to the customer. As a result of the solely machine interaction, the customer expects perfection.

We were exploring two uber-rickshaw directions to provoke some of these discussions. One was imagining what it would look like if low level Uber employees revolted against the company itself (in light of all of the press recently) and one day instead of going on strike they released a ‘new look and feel’ to the app which really was placing an animal theme over the entire app. For example, the cars on the map would become animals instead. The license plate information would turn into the horse brand and name. The driver image would be placed on a horse's body, etc.

Figure 3: Concept sketches to Zoo-ber, a potential app update where all the cars and drivers appear as animals and rickshaws

The second direction we were considering, was placing an Uber app in the 1920s on a rickshaw, where the aspects of personalization were taken to an extreme, such that the puller of the rickshaw had to go to great lengths to satisfy the requests (ex: running in a suit).

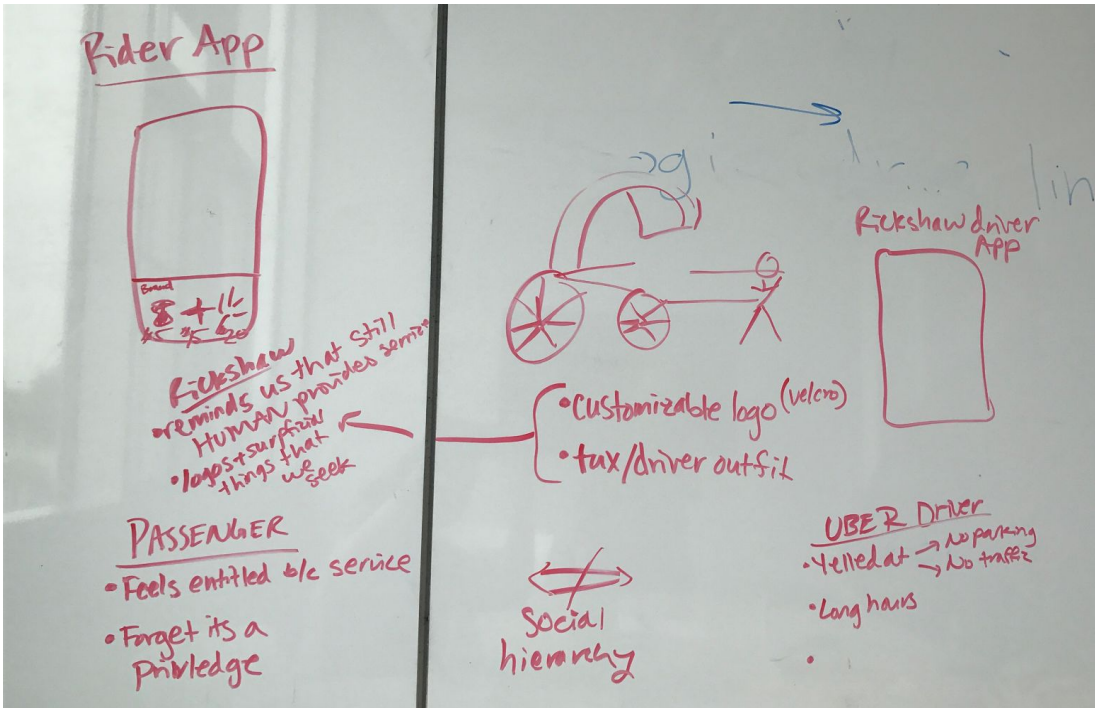

Figure 4: Uberick concept where a rickshaw was placed in the 1920s and personalization such as car brand, theme song, driver greeting, and driver attire were taken to an extreme

We ultimately went with the extreme personalization of the rickshaw with car brand logos, theme songs, driver attire, and facial greeting because the animal direction we feared would embarrass the driver. Throughout this project we were trying to be very cognizant that both rickshaw and Uber drivers make their livelihood providing these services.

Rickshaw Design

Brainstorming

Once we decided to have rickshaw as our human-powered transportation, we started our design process. We went through numerous rounds of concept sketches where we explored different methods of constructing our rickshaw. Our initial idea was to modify an existing wheelbarrow and somehow add wheels for stability and a seat for comfort. We went to the local Urban Ore to see if there are anything we can reuse and we gain some insights on dimensions and how viable this idea was.

Figure 5: Urban Ore field trip

After deciding against the idea of modifying a wheelbarrow, we went into another round of concept sketches. We made some small scale models which helped us visualize another way of constructing our rickshaw. We came up with the idea of using half inch plywood and cutting slots in each pieces to construct a 3D rickshaw.

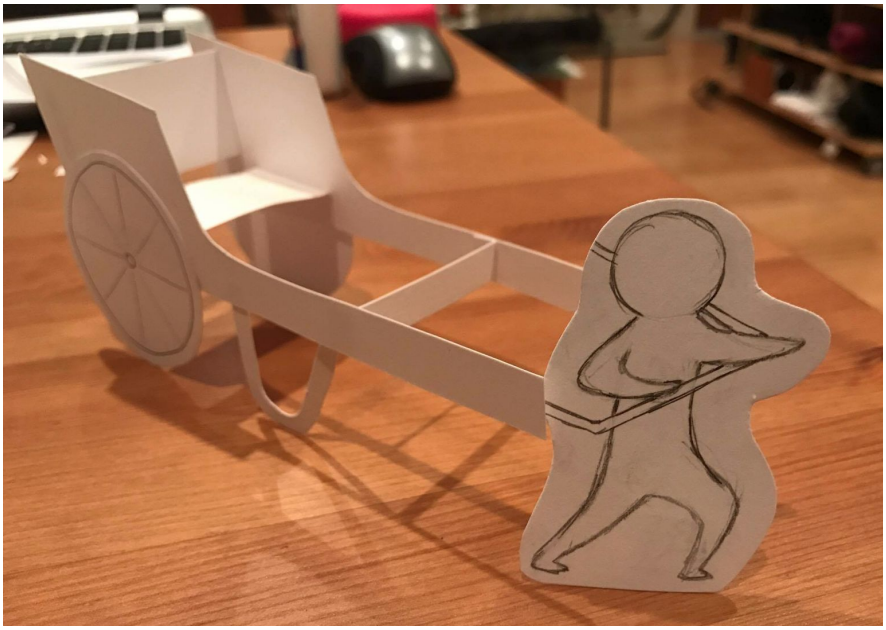

Figure 6: Bristol model of our initial rickshaw design

Construction

After accessing our resources and studying our models, we decided that ShopBot is our best option. We modeled our final designed in Rhino 3D and cut our pieces in the Invention Lab. We filed down the sharp edges and made sure all the pieces fit into the corresponding slots. Once the rickshaw is assembled, we secured the pieces together with wood glue and screws. L-brackets were added underneath the seat area, which tooks the most load, to strength our overall structure.

After the body of the rickshaw is assembled, we attached the wheels using two aluminum plates on the side pieces. Fender washers were used to maximize the load distribution on the wood and aluminum plate.

We added some final touches on the rickshaw such as a seat cushion, car brand cutouts, license plate, and hand stitched leather handles. We decided to use velcro to attach the car brand logos to the rickshaw to have a comical effect while adding to the physical labor aspect of our project. We also painted our engraved logo on the side of the rickshaw to increase the visibility.

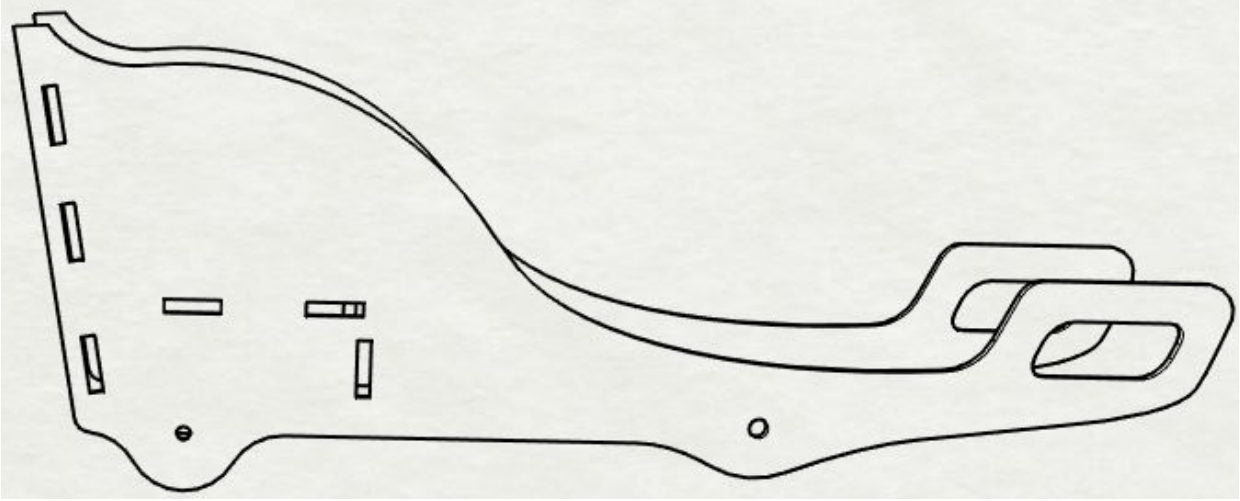

Figure 7: Final rickshaw design in Rhino

Figure 8: Cutting out the rickshaw pieces with the Shopbot

Figure 9: Assembling rickshaw pieces with wood glue and wood screws

Figure 10: Side profile of the rickshaw with wheels and painted logo

Figure 11: Aluminum plates used as interface between the wooden pieces and wheels

Figure 12: Rear view of the rickshaw with license plate and Tesla logo

Figure 13: Hand stitched leather handle

Designing the Music Player

In designing the rickshaw, we wanted it to emphasis physical labor and mindless busywork as much as possible, and so shied away from features that would take away that experience. To that end, we opted for velcro branding instead of electronic, screen-based displays because we wanted spectators to see the driver going to ridiculous and comical lengths to appease the customer.

We chose to install a clunky, old-style music player to the side of the rickshaw to further juxtapose modern technology and menial, physical labor, as the driver has to push unnaturally large arcade buttons on the side of his vehicle in order to activate a theme song (a nod to Uber's recent feature, which allows riders to synchronize their Spotify accounts with the app so they can enjoy their favorite tunes wherever they go), whereas the rider gets the comfort of using a sleek, modern app to customize and request their ride.

App Design and Structure

Once we had our concept, we then storyboarded out what the rider and driver experience would be like with the app and the rickshaw.

Figure 14: Storyboard of our typical user scenario

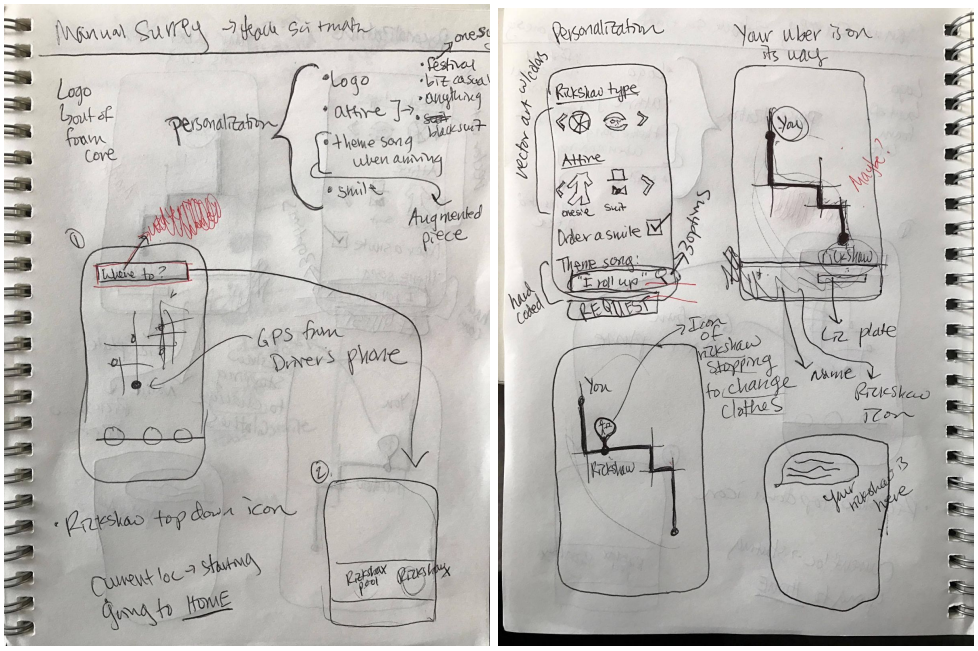

Figure 15: Initial sketches of wireframes for the Uberick application

The Uberick logo was designed to incorporate both a rickshaw and the current Uber logo.

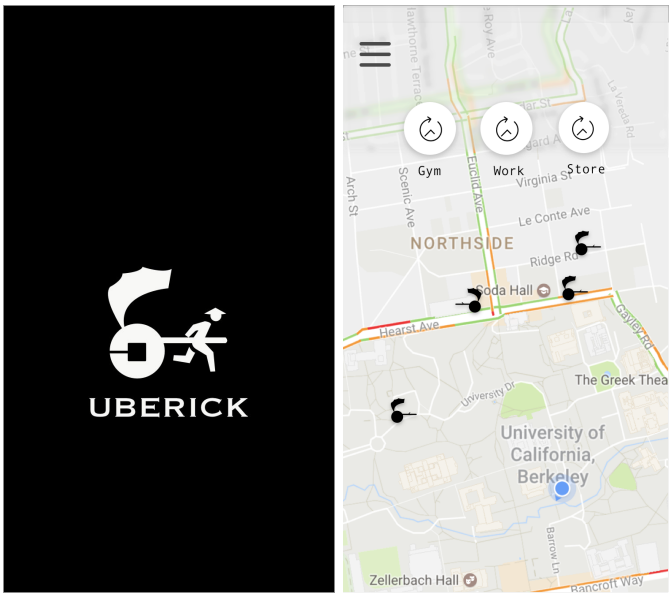

Figure 16: Designs for the Rider side of the app

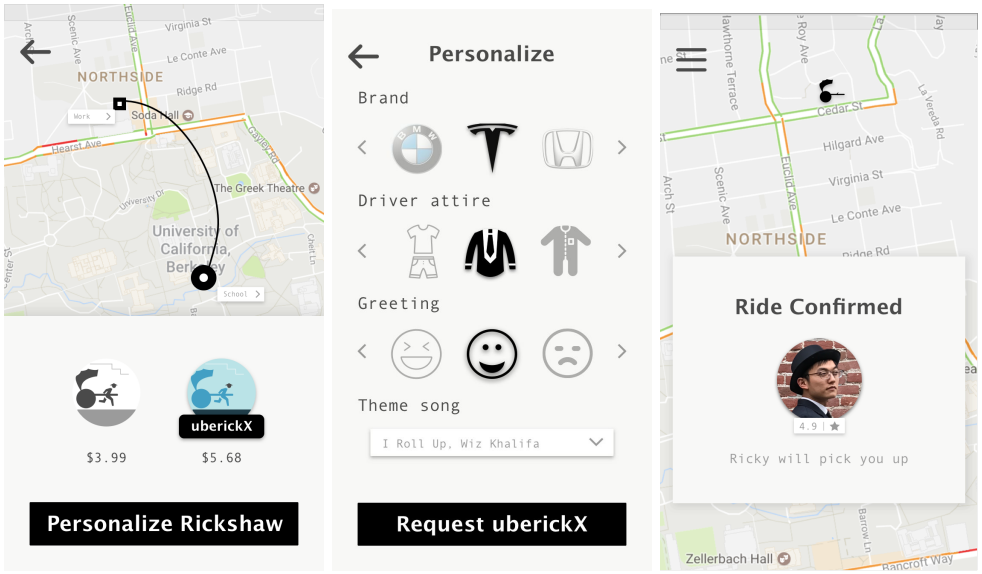

Figure 17: More designs for the Rider side of the app

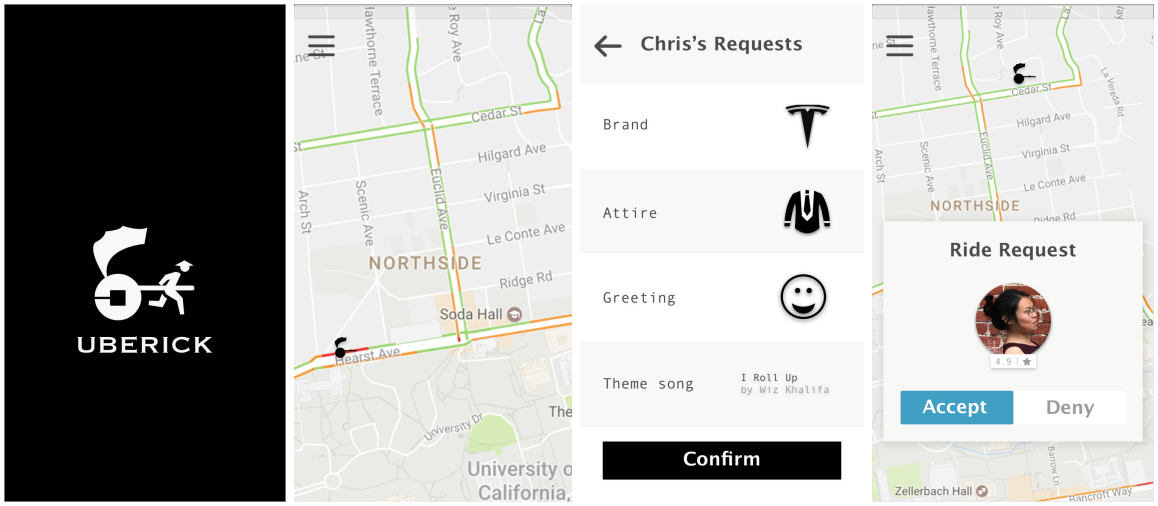

Figure 18: Designs for the driver side of the app

We selected the Android platform for our mobile app because of its open source nature and to make future integration with Google Maps smoother. The app's database and server is handled by Firebase because of its smooth integration with Android Studio. Registered users can choose whether they want to be a driver or a rider and are then directed to the according Android "Activity" upon sign in. The driver side of the app then listens on the database and receives a notification whenever a rider sends a ride request to the server.

Future iterations may include preventing drivers from receiving Dialog windows during a ride, integrating exact GPS mapping, and allowing users to be both drivers and riders.

Video Design

We wanted the video to have a Charlie Chaplin feel, set back in the 1920s. To give it this effect, we elected for the subject matter to be completely focused on the userflow of Uberick. We desaturated all the shots to black and white, and used 1920s music to set the context. Most of the videos were sped up to give the quick-paced, comedic, Charlie Chaplin feel.

The overall storyboard depicted a typical user case, but many of the scenes weren't planned out until during the filming. We took advantage of objects in our filming environment and improvised scenes around the locations and props available. Our goal was to produce a humorous and comical video that could, at the same time, spark a worthwhile conversation on social inequality.

Figure 10: Coming up with the changing scene by utilizing the surrounding bushes and tree

Figure 20: Scene of rider exitting house to get on rickshaw